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ABSTRACT

A method and system for scheduling data in the down, or forward, link, on a per packet basis in a wireless telecommunications network. The scheduler determines the order of packets to be sent from multiple queues based on per IP QoS, real time channel condition and real time buffer occupancy. The scheduler determines the necessary support link adaptation on a per packet basis based on per packet QoS and the channel condition. The scheduling system and method take into consideration both upper layer per packet QoS, for example packet delay bound, and the real time channel condition (C/I) for each mobile terminal. The method of the present invention also determines the layer 2 frame length for each scheduled packet.

$\frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx = \frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx$